

FIG. 1

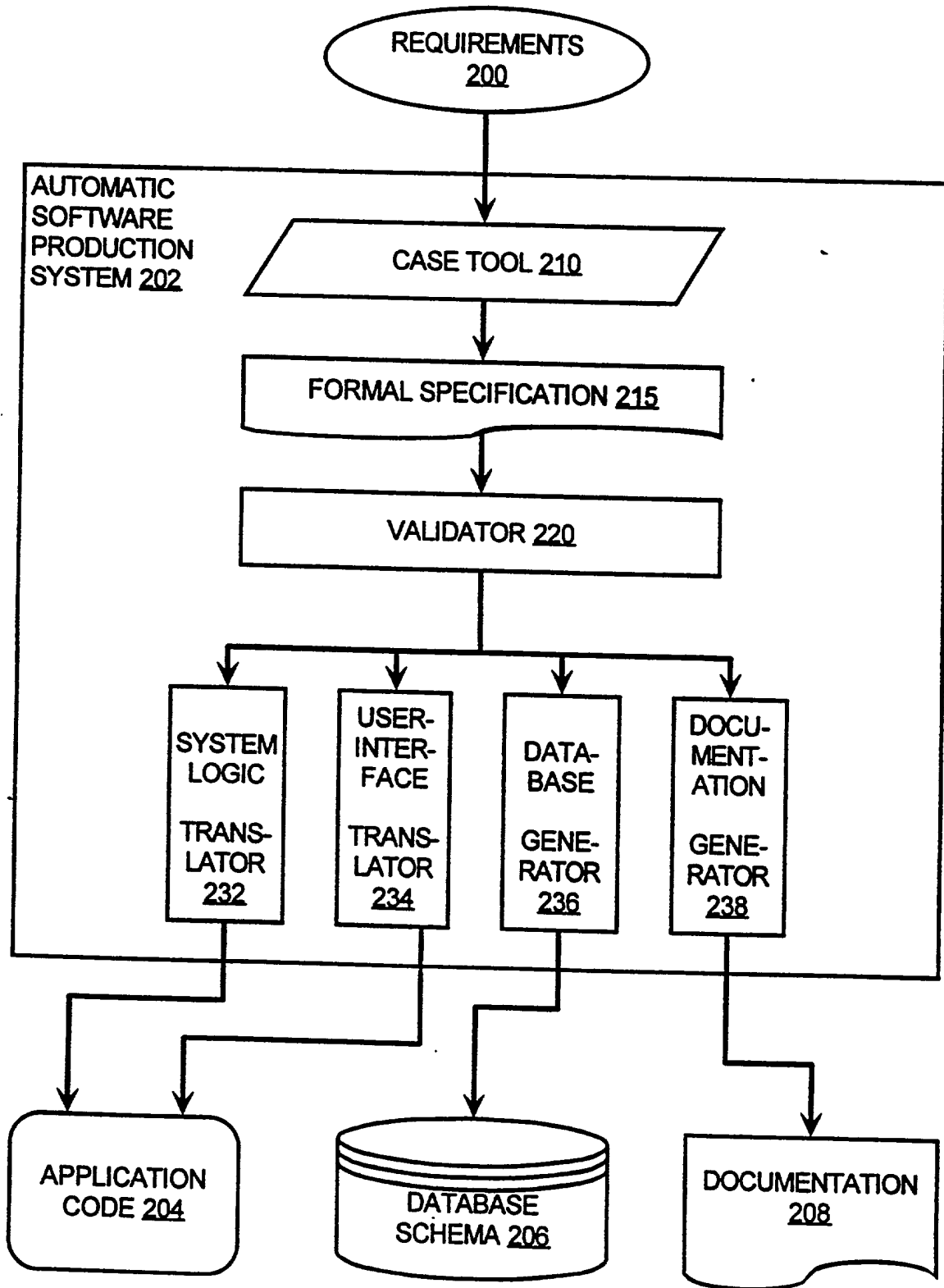


FIG. 2

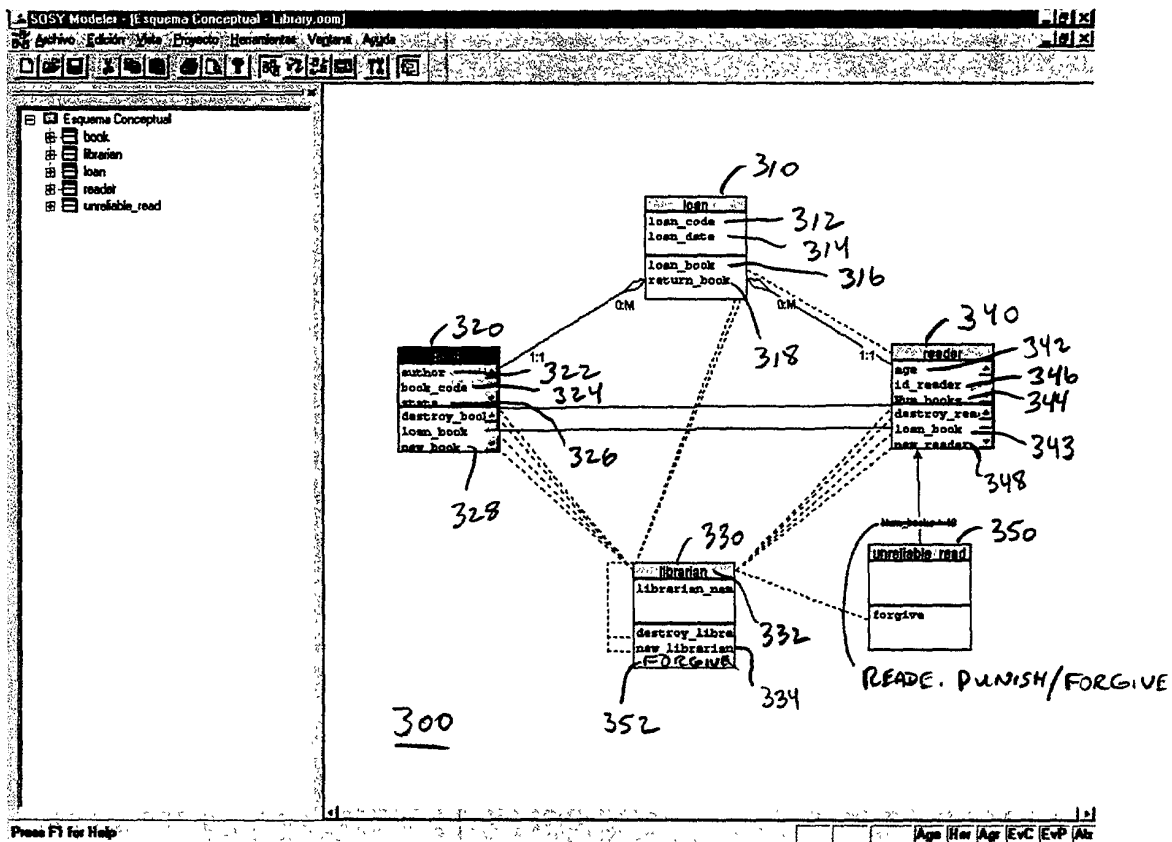


FIG. 3

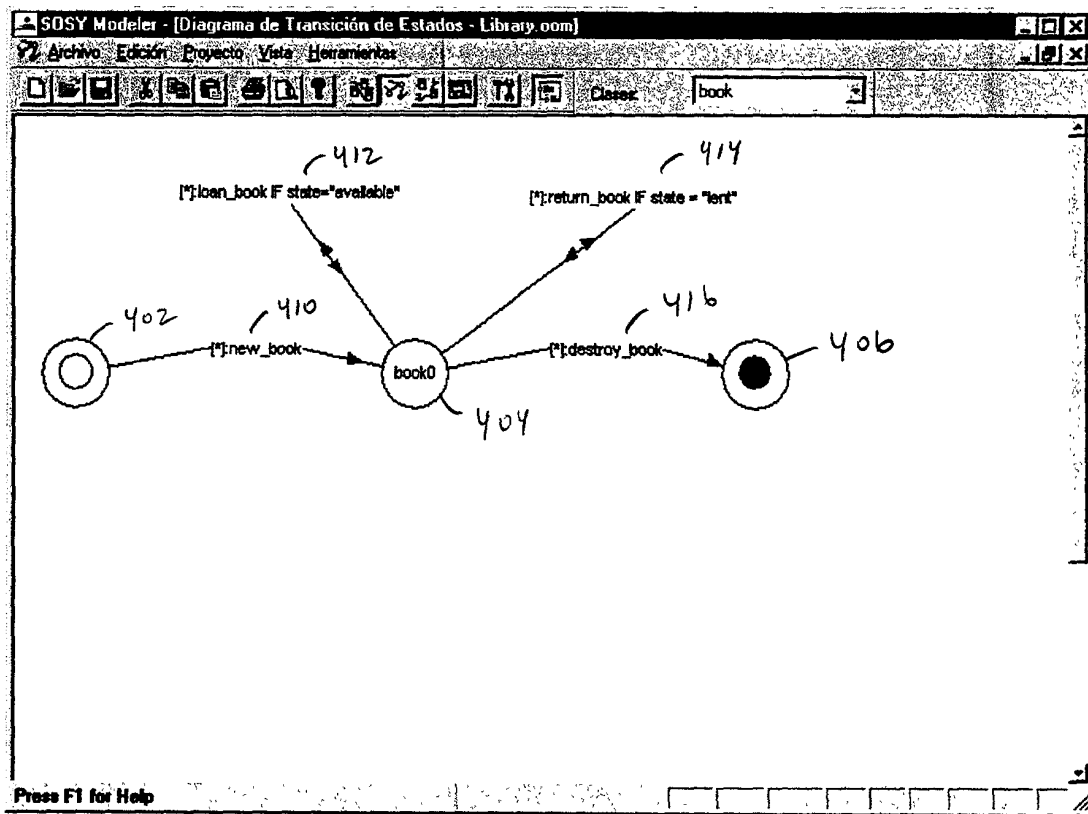


FIG. 4A

096744 0604
T0T030 E142/850

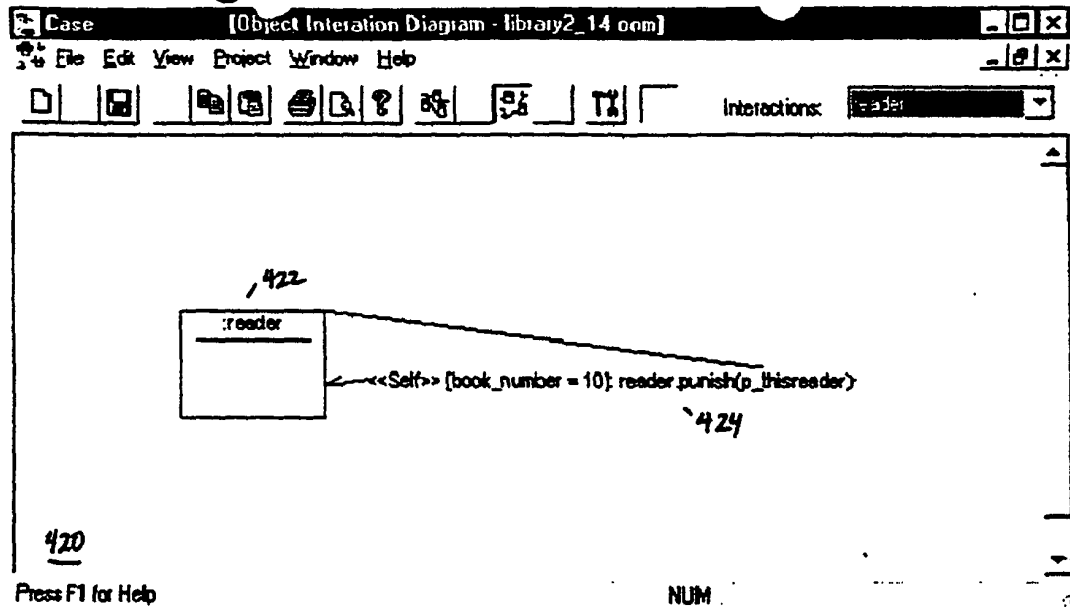


FIG. 4B

Functional Model

Class: reader Attribute: book_number

Cancel

Event	Effect	Condition
loan_book	+	1
return_book	-	1

Add

Modify

Delete

Category

☒ Purpose ☐ State-independent ☐ Discrete domain

Valuation Details

Event: loan_book Action type: Increment

Valuation condition:

Effect of the event:

1

FIG. 5

09872413.060101

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES OF SYSTEM LOGIC TRANSLATORS WILL PERFORM

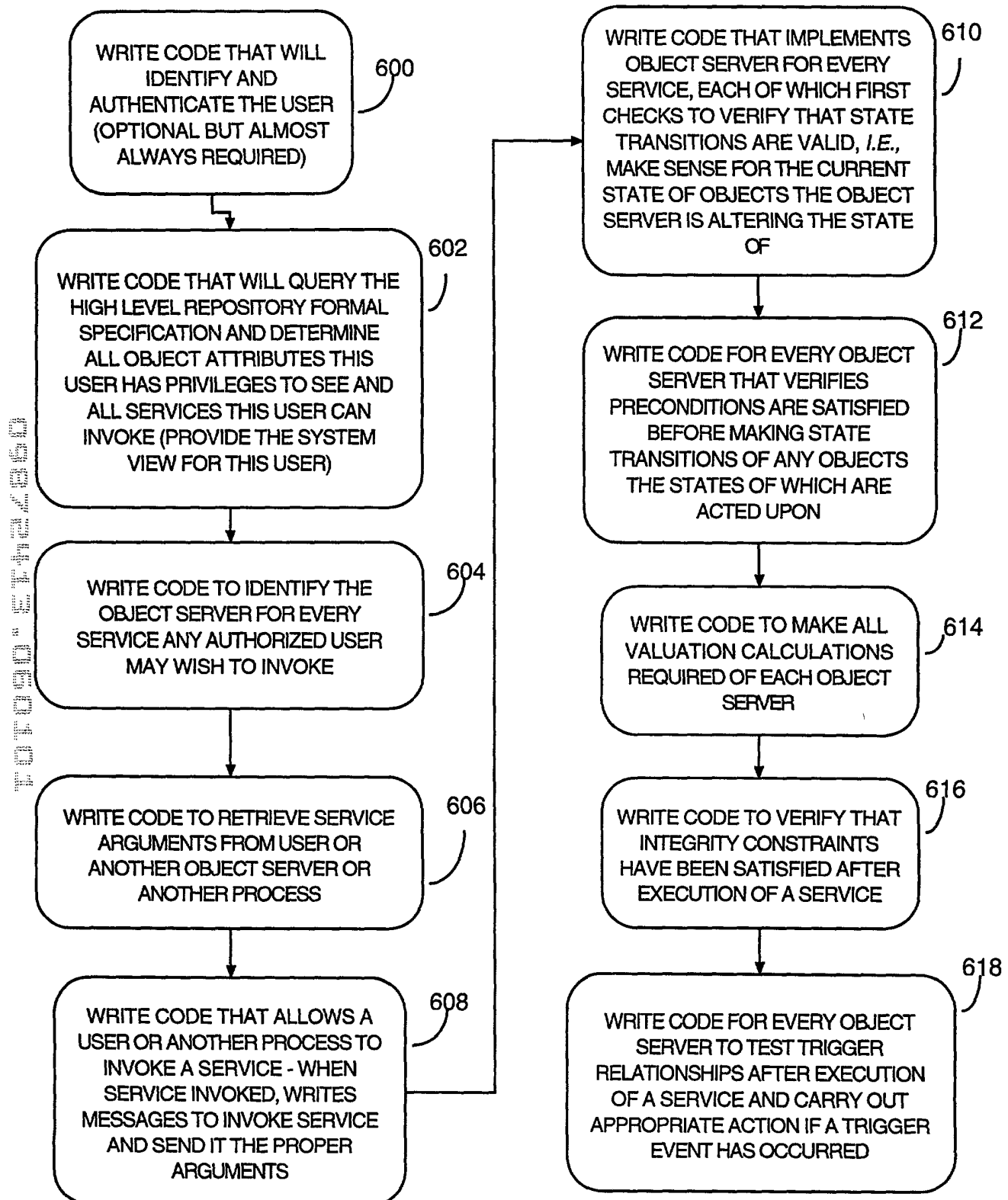


FIG. 6

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE USER INTERFACE
TRANSLATOR SUBGENUS WILL PERFORM

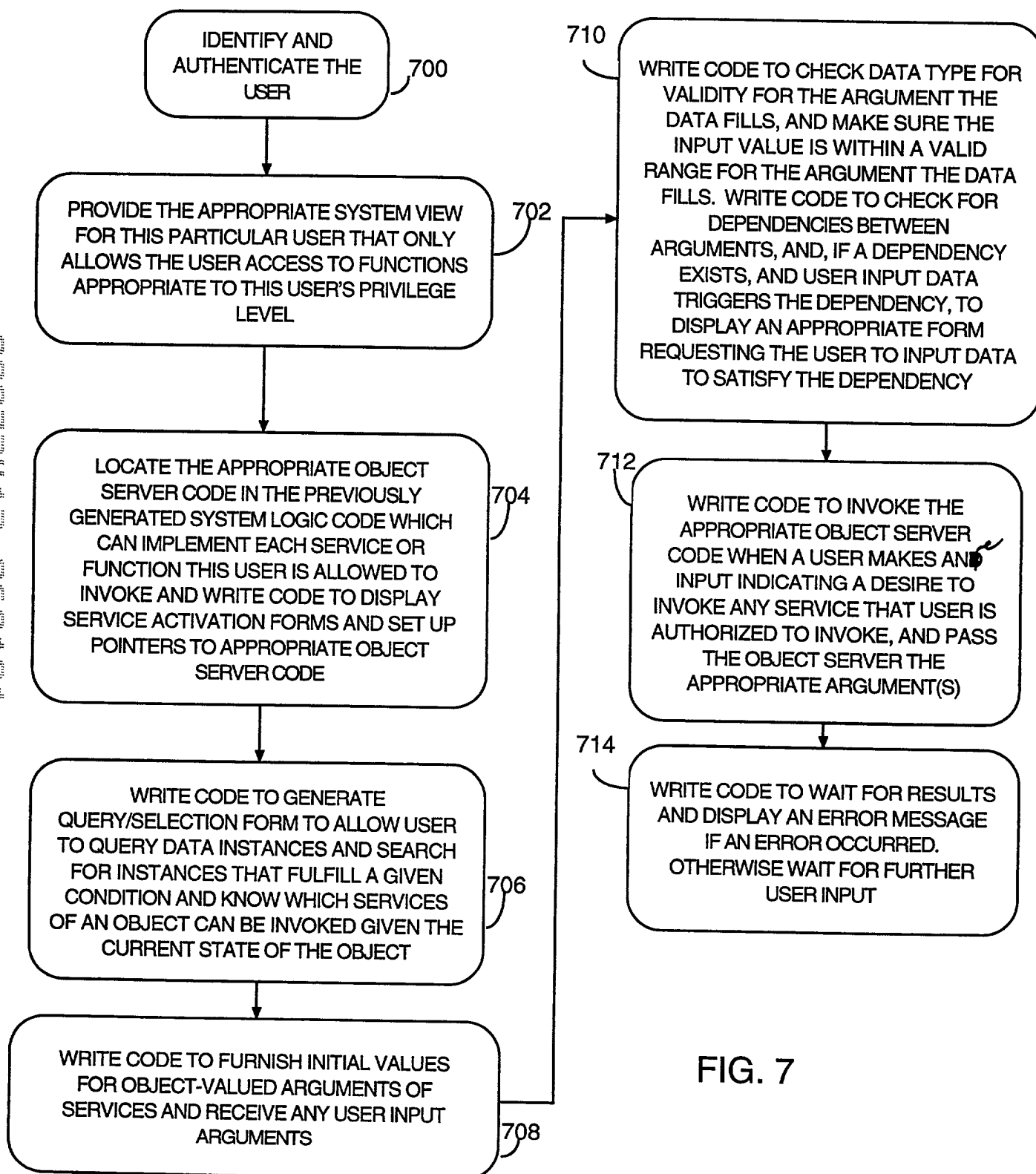


FIG. 7

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DATABASE GENERATOR
TRANSLATOR SUBGENUS WILL PERFORM

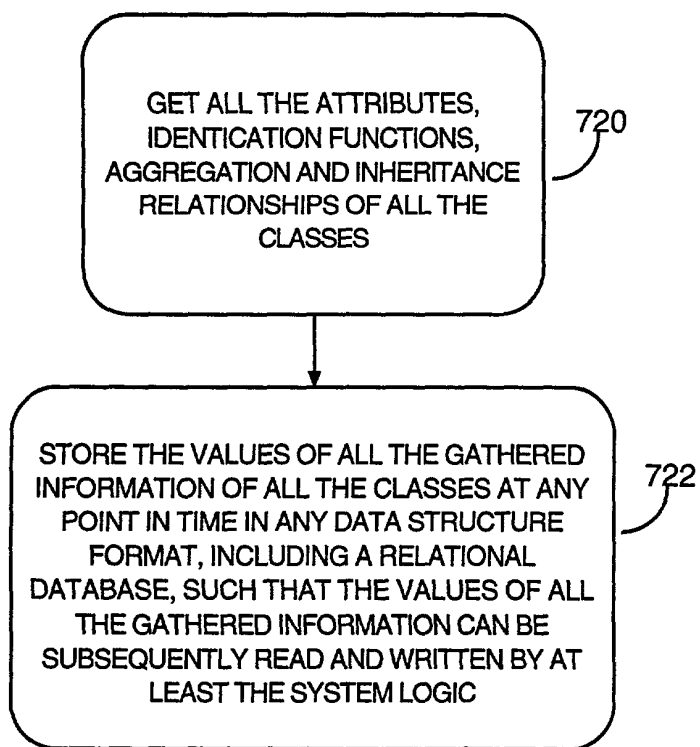
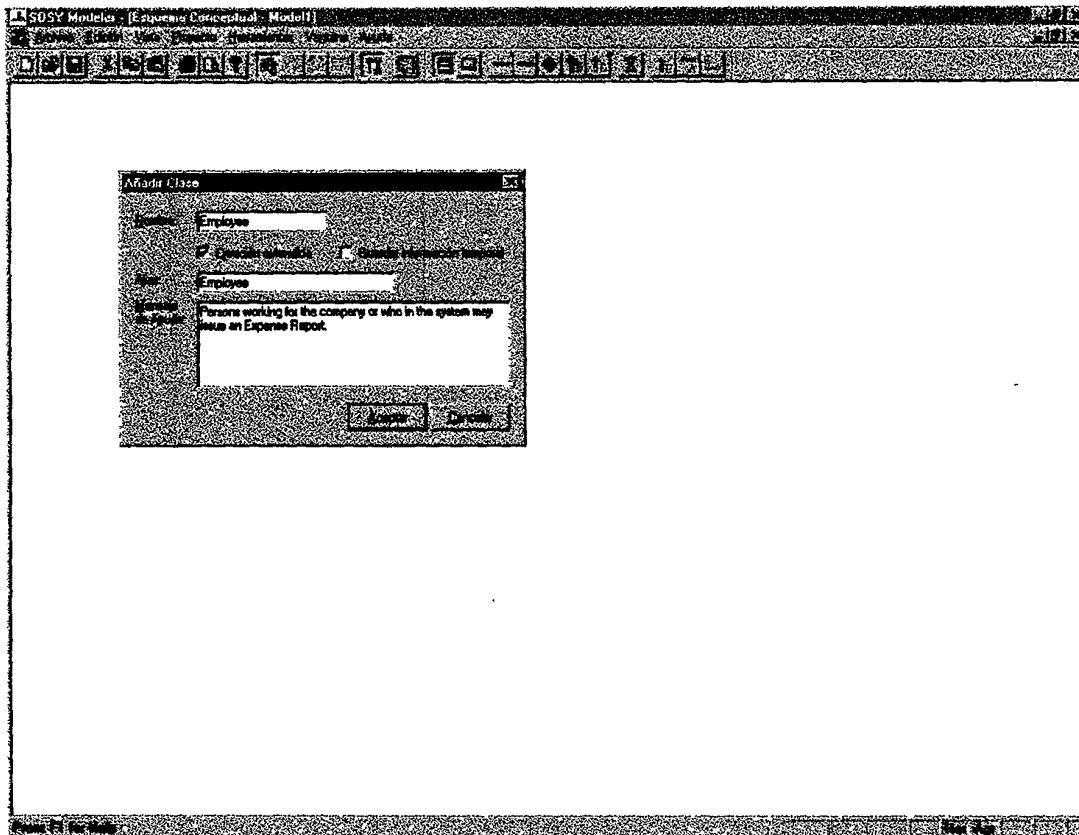


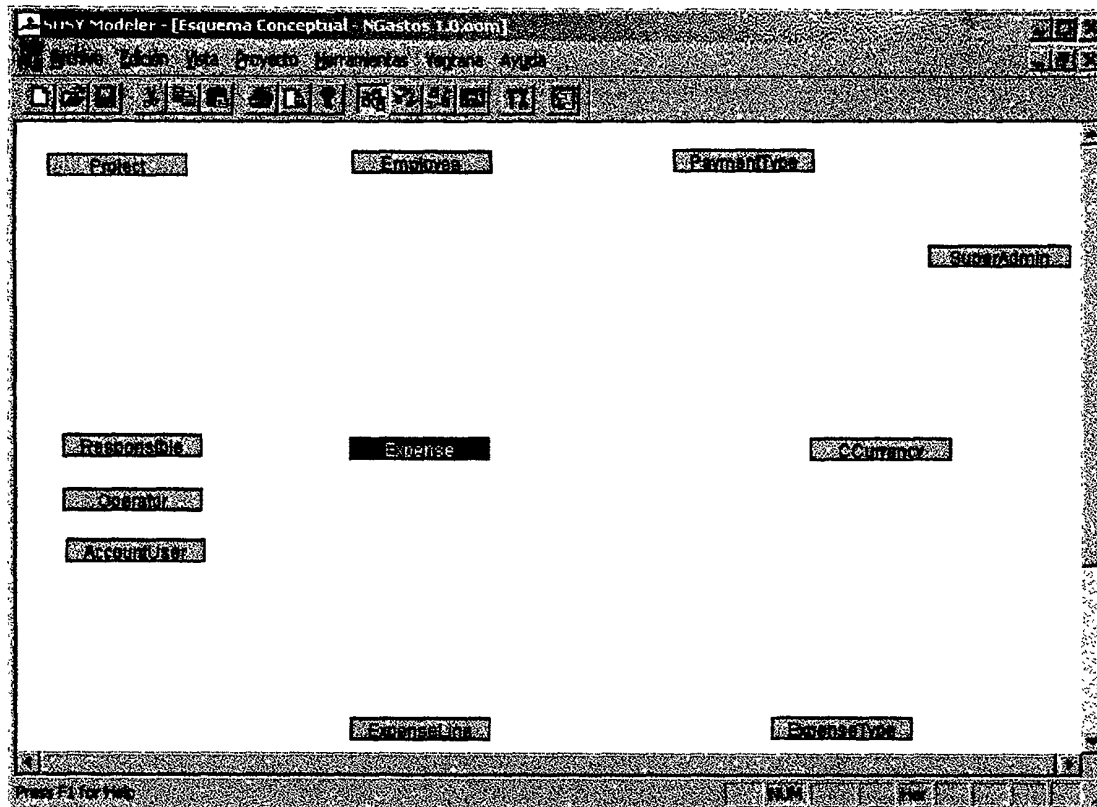
FIG. 8



class creation dialog

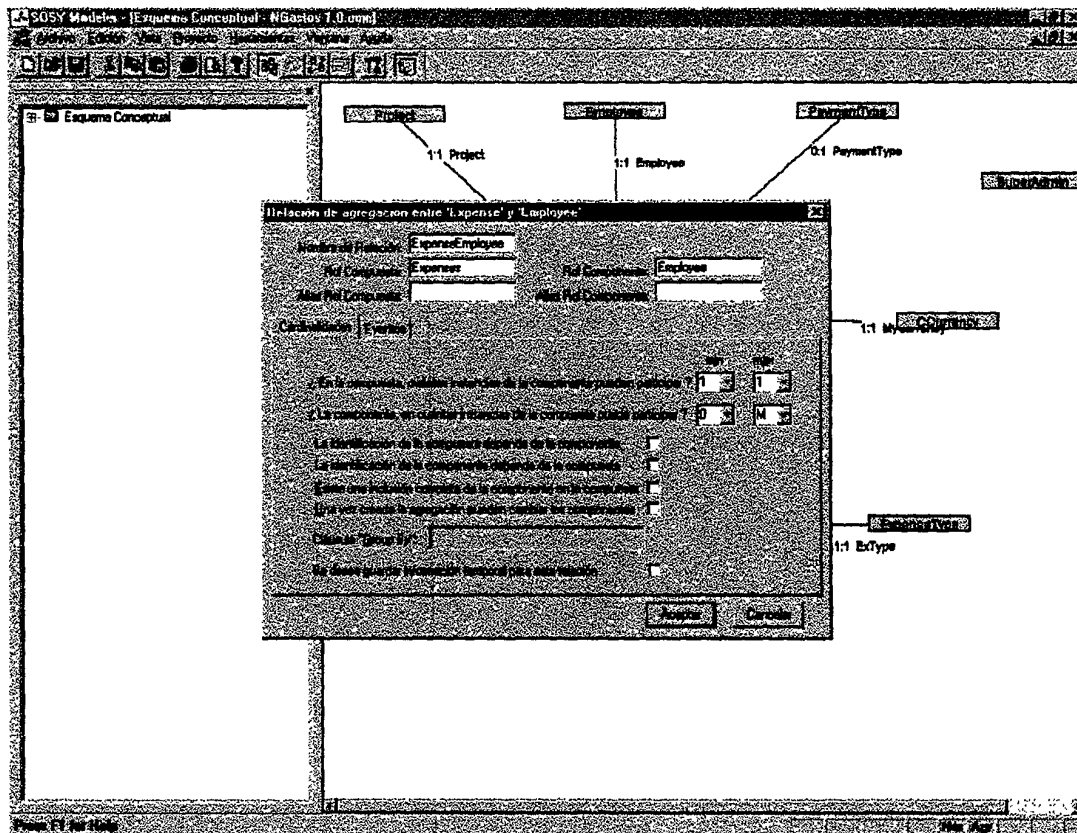
FIG. 9A

20250413.060401



DIALOG SHOWING ALL CLASSES NEEDED & CREATED
IN EXPENSE MANAGEMENT SYSTEM

FIG. 9B



dialog to create and modify relationships between classes

FIG. 90

09372417-03040

Clase

Atributos | Servicios | Definiciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Atributos

Nombre	Tipo atributo	Tipo dato	Id	Valor	Valor default	Padre al crear	Nulos
PresentDate	Constante	Date		today()	Si	No	
Status	Variable	Int		0	No	No	
Cause	Variable	String	255		Si	No	
AuthoDate	Variable	Date		NULL	No	Si	
AuthoComments	Variable	String	255	NULL	No	Si	
PaymentDate	Variable	Date		NULL	No	Si	
PayComments	Variable	String	255		No	Si	
TotalExpenses	Derivado	Real					
TotalExpensesCur	Derivado	Real					
Advances	Variable	Real		0	Si	No	
AdvancesCur	Derivado	Real					
Exchange	Variable	Real			No	Si	
Balance	Derivado	Real					
BalanceCur	Derivado	Real					

Nombre: Tipo Atributo Tipo Dato

Información Temporal

Clase: Expense

Aceptar Cancelar

(A)

Clase

Atributos | Servicios | Definiciones | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Atributo

Balance

Fórmulas de Derivación

Condición	Fórmula
	TotalExpenses - Advances

Condición:

Fórmula:

Observaciones

Clase: Expense

Aceptar Cancelar

(B)

FIG. 11

The screenshot shows the 'Expense Report' window. The menu bar includes File, Edit, Services, Expenses, Transactions, Reports, Relations, and General. The toolbar contains icons for file operations and editing. The 'Particular Transactions' section lists various transactions and their categories. The 'Particulars' section contains a table for recording expenses. The 'Details' section has fields for 'Name' and 'Type date'. The 'Remarks' section is a text area for additional notes. At the bottom, the 'Class' dropdown is set to 'Expense', and there are 'Accept' and 'Cancel' buttons.

Particulars	Category
newexpense	New
deleteexpense	Destroy
modify	
close	
authorize	
approve	
pay	
rejectauth	
rejectpayment	
instPaymentType	Shared with PaymentType
delPaymentType	Shared with PaymentType
DELETEALL	Tran
TPAY	Tran

Expense	Type date
Expense	Expense
Cause	String
Advances	Real
Exchange	Real

Details

Name: Type date:

Remarks:

Class: **Expense** [v]

Accept Cancel

SERVICES OF CLASS "EXPENSE"

FIG. 12

0304-0304-0304

Classe

Attributs | Services | Domaines | Restrictions | Agences | Translations | Relations | Generalisations

Exemples

Exchange

Formule: Exchange > 0

Message De Erreur: Exchange must be greater than zero

Domaines

Formule: []

Message De Erreur: []

Class: Expense

Accepter Canceler

INTEGRITY CONSTRAINTS OF EXPENSE CLASS
FIG. 14

The value of the attribute "Cause" will be loaded with the value of the argument "p_Cause" of the event "modify" when "modify" was executed.

The screenshot shows a dialog box titled "Modelo Funcional". At the top, there are two dropdown menus: "Clase" set to "Expense" and "Atributo" set to "Cause". To the right of these are "Aceptar" and "Cancelar" buttons. Below the dropdowns is a table with three columns: "Evento", "Efecto", and "Condición". The first row contains "modify", "p_Cause", and is empty. Below the table are "Agregar", "Modificar", and "Borrar" buttons. Underneath the table is a "Categoría" section with three radio buttons: "Cardinal", "De Estado" (which is selected), and "De Situación". Below this is a "Detalles de Evaluación" section. It contains an "Evento" dropdown set to "modify", a checkbox "Inferir para el resto de atributos" which is unchecked, and a "Condición de evaluación" field with the text "IF:". Below this is an "Efecto del evento" field containing "p_Cause". There are handwritten annotations "724" next to the "Condición de evaluación" field and "726" next to the "Efecto del evento" field.

DIALOG BOX TO CREATE EVALUATION OF
"CAUSE" ATTRIBUTE WITH THE
"MODIFY" EVENT TO FORM PART OF
FUNCTIONAL MODEL
FIG. 15

101060742 ET 090920

Clase

Relaciones | Servicios | Desactivados | Restricciones | Agentes | Transacciones | Relaciones | Generalidades

Clase proveedor:

Servicios

Servicio
newexpense
modify
close
authorize
rejectautho
DELETEALL

Clase AccountUser agente de:

Servicio	Temporalidad
Expense.approve	No
Expense.rejectpayment	No
Expense.TPAY	No

Histor temporal: ☐ No histor temporal: ☐

Clase AccountUser tiene visibilidad sobre:

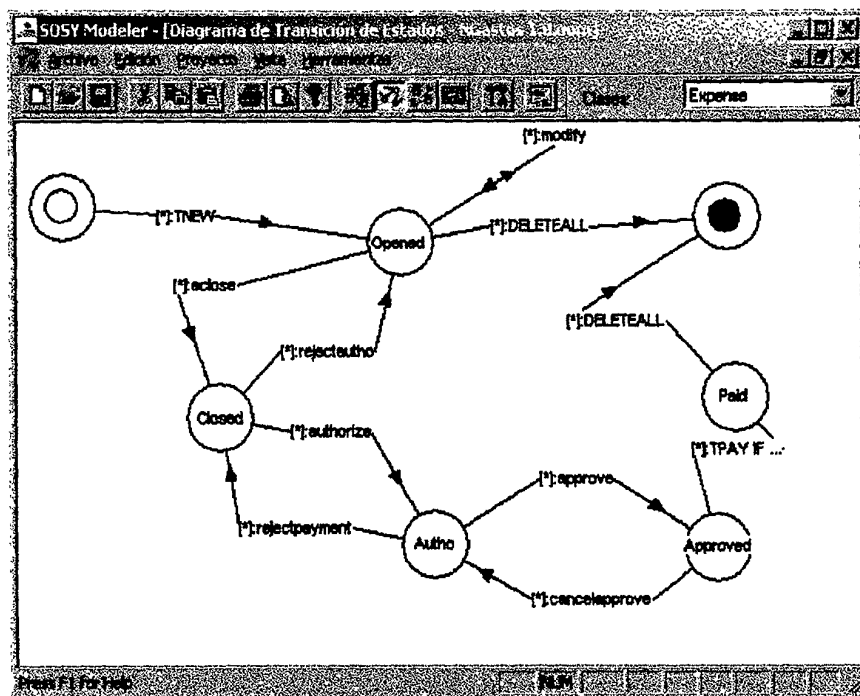
Attributes
Expense.id_Expense
Expense.PresentDate
Expense.Status
Expense.PaymentDate
Expense.PayComments
Expense.AuthoDate
Expense.TotExpenses
Expense.TotExpensesCur
Expense.Advances

Clase:

Accepta Cancela

AGENT RELATIONSHIP DIALOG THAT CAN BE
USED TO SET WHICH SERVICES "ACCOUNTUSER"
CAN ACCESS AND VISIBILITY OF CLASS
ATTRIBUTES FOR THIS USER

FIG. 16



STATE TRANSITION DIAGRAM FOR CLASS "EXPENSE"

FIG. 17

050343-050101

According to last paragraph of Procedure, if the Advances are greater than total expenses, the system must force the confirmation of the account user. It is expressed as a precondition in the "TPAY" transaction. Next figure shows it.

The image shows a software dialog box titled "Transición". It contains several fields and sections:

- Origin:** A dropdown menu with "Proposed" selected.
- Destino:** A dropdown menu with "Paid" selected.
- Buttons:** "Aceptar" and "Cancelar" buttons are located in the top right corner.
- Detalle:** A section on the left containing a label "Argumentos" and a text area with "Argumentos" and "Superávit".
- Servicio:** A dropdown menu with "TPAY" selected.
- Precondición:** A text area containing the logical expression "Balance > 0 OR ps_ReturnAdvance = TRUE".
- Condición de control:** An empty text area.
- Mensaje en caso de Error:** A text area containing the message "Check the advanced money excess".

DIALOG BOX TO MODEL PRECONDITION

FIG. 18

09972413-050101

093741-060101

Conjunto de Visualización

Nombre: CV_Expense Limpia Ignora

Atributos a visualizar:

Atributo	Tipo dato
Project.ProjectName	String
Employee.EmpName	String
Employee.EmpSur...	String
Status	Int
AuthoDate	Date
PaymentDate	Date
TotExpenses	Real
Balance	Real

<< Añadir Eliminar >> Subir Bajar Agregar

Atributos:

Atributo	Tipo dato
Cause	String
AuthoDate	Date
AuthoComments	String
PaymentDate	Date
PayComments	String
TotExpenses	Real
TotExpensesCur	Real
Advances	Real
AdvancesCur	Real
Exchange	Real
Balance	Real
BalanceCur	Real

Clase: Expense Aceptar Cancelar

DIALOG BOX USED BY SOSY MODELER
TO ESTABLISH A SET OF ATTRIBUTES
TO BE DISPLAYED FOR THE "EXPENSE" CLASS

FIG. 19

05072413-060101

Filtro

Filtro: Alias:

Fórmula:

Observ:

Variables

Nombre	Alias	Tipo dato	Tipo estilo	Estilo	
vf_Project	Project	Project	Sel. Población		<input type="button" value="Nuevo"/>
vf_Employee	Employee	Employee	Sel. Población		<input type="button" value="Modificar"/>
vf_DateIniIssue	Initial Issuing Date	Date			<input type="button" value="Borrar"/>
vf_DateEndIssue	Final Issuing Date	Date			
vf_DateIniApp	Initial Approving D...	Date			

Tipos

☒ Simple ☐ Objetivado

Nombre: Estilo de introducción:

Alias: Estilo de selección:

Tipo de dato:

Class: Expense

DIALOG BOX USED BY SOSY MODELER
TO ESTABLISH THE SEARCHING CRITERIA
FOR THE EXPENSE CLASS AND TO ESTABLISH
THE FILTER FORMULA^{TO USE} AND THE VARIABLES
TO REQUEST THE USER TO ENTER

FIG. 20

FLOWCHART OF THE FUNCTIONS THAT ALL SPECIES IN THE DOCUMENTATION
GENERATOR TRANSLATOR SUBGENUS WILL PERFORM

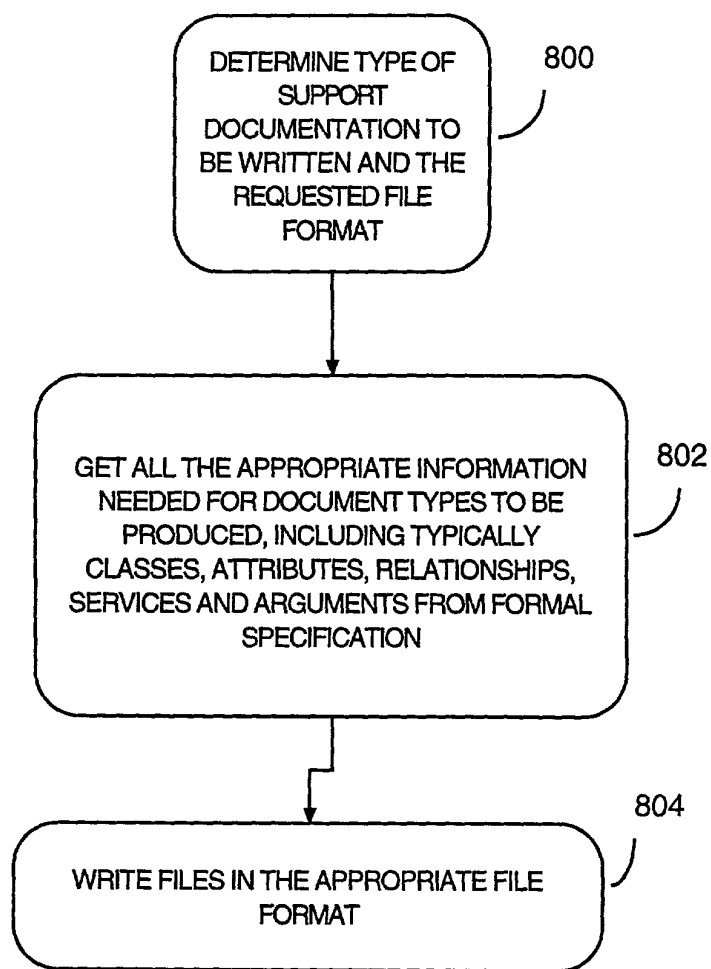


FIG. 21